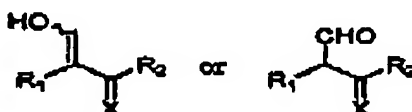


PROPOSED EXAMINER'S AMENDMENT*U.S. Serial No 10/757,321**March 7, 2006*

1. (Currently Amended) A process to produce compounds represented by a formula (II);



(II)

or both

wherein

R₁ represents hydrogen, halogeno, alkyl optionally substituted by alkoxy, alkylthio or halogen, alkoxy optionally substituted by halogen or aryl, a group having an alicyclic structure, a group represented by R₃S(O)_q, a group represented by R₄R₅N, a group represented by R₆C(=O), nitrile, nitro, a group represented by R₇C(=NR₈), aryl or aryloxy optionally substituted by alkoxy, halogen or alkyl which may be substituted by halogen, phenoxy or heteroaryloxy which may be substituted by haloalkyl, alkyl, alkoxy, haloalkoxy, amino, nitrile, alkylthio, alkylsulfonyl or alkylsulfinyl, or aralkyl optionally substituted by halogen,

R₂ represents alkyl optionally substituted by alkoxy, alkylthio or halogen, alkoxy optionally substituted by halogen or aryl, a group having an alicyclic structure, optionally substituted amino, aryl optionally substituted by alkoxy, halogen or alkyl which may be substituted by halogen, phenoxy or heteroaryloxy which may be substituted by haloalkyl, alkyl, alkoxy, haloalkoxy, amino, nitrile, alkylthio, alkylsulfonyl or alkylsulfinyl, optionally substituted heterocyclic or heteroaryl having a 5 to 7 membered mono cyclic or 9 to 11 membered fused ring containing 1 to 3 nitrogen or oxygen, or aralkyl optionally substituted by halogen,

R₃, R₄ and R₅ each independently represents alkyl optionally substituted by alkoxy, alkylthio or halogen, aryl optionally substituted by alkoxy, halogen or alkyl which may be substituted by halogen, phenoxy or heteroaryloxy which may

be substituted by haloalkyl, alkyl, alkoxy, haloalkoxy, amino, nitrile, alkylthio, alkylsulfonyl or alkylsulfinyl, optionally substituted heterocyclic or heteroaryl having a 5 to 7 membered mono cyclic or 9 to 11 membered fused ring containing 1 to 3 nitrogen or oxygen, or aralkyl optionally substituted by halogen,

R₄ and R₇ each independently represents alkyl optionally substituted by alkoxy, alkylthio or halogen, alkoxy optionally substituted by halogen or aryl, a group having an alicyclic structure, optionally substituted amino, aryl optionally substituted by alkoxy, halogen or alkyl which may be substituted by halogen, phenoxy or heteroaryloxy which may be substituted by haloalkyl, alkyl, alkoxy, haloalkoxy, amino, nitrile, alkylthio, alkylsulfonyl or alkylsulfinyl, optionally substituted heterocyclic or heteroaryl having a 5 to 7 membered mono cyclic or 9 to 11 membered fused ring containing 1 to 3 nitrogen or oxygen, or aralkyl optionally substituted by halogen,

R₈ represents alkyl optionally substituted by alkoxy, alkylthio or halogen, alkoxy optionally substituted by halogen or aryl, nitrile, nitro, aryl optionally substituted by alkoxy, halogen or alkyl which may be substituted by halogen, phenoxy or heteroaryloxy which may be substituted by haloalkyl, alkyl, alkoxy, haloalkoxy, amino, nitrile, alkylthio, alkylsulfonyl or alkylsulfinyl, optionally substituted heterocyclic or heteroaryl having a 5 to 7 membered mono cyclic or 9 to 11 membered fused ring containing 1 to 3 nitrogen or oxygen, or aralkyl optionally substituted by halogen,

q represents 0, 1 or 2, and R₉ and R₁₀ each independently represents hydrogen, lower alkyl or aryl optionally substituted by alkoxy, halogen or alkyl which may be substituted by halogen, phenoxy or heteroaryloxy which may be substituted by haloalkyl, alkyl, alkoxy, haloalkoxy, amino, nitrile, alkylthio, alkylsulfonyl or alkylsulfinyl, and

R₁ and R₂ each represents a group which may bond to jointly form a ring, and

X represents oxygen or a group represented by a formula of NR₉R₁₀,
~~comprising reacting characterized in that the compound is subjected to a reaction with~~ a methylene compound represented by a formula (I);



(I)

wherein R₁, R₂ and X are as defined above, with either a formic acid ester or an orthoformic acid ester in the presence of a Lewis acid and a base.

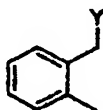
characterized in that the compound is subjected to a reaction with a methylene compound represented by a formula (I);



(I)

wherein R₁, R₂ and X are as defined above, with either a formic acid ester or an orthoformic acid ester in the presence of a Lewis acid and a base.

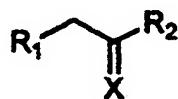
2. (Original) The production process according to claim 1, wherein the base is a tertiary amine.
3. (Original) The production process according to claim 1, wherein the group represented by R₁ in the formula (I) is a group represented by the following formula;



wherein Y represents a group to be eliminated when it is reacted with a nucleophilic reagent, optionally substituted phenoxy or optionally substituted heteroaryloxy, and the group represented by R₂ is a group represented by a formula of OR₁₁, wherein R₁₁ represents lower alkyl.

4. (Original) The production process according to claim 1, wherein the compound represented by the formula (I) is methyl 2-[(2-isopropoxy-6-trifluoromethylpyrimidine-4-yl)oxymethyl] phenylacetate.

5. (Currently Amended) ~~A compound~~ Compound represented ~~[[a]]~~ by formula (I),



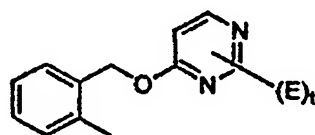
(I)

wherein

R_2 represents alkyl optionally substituted by alkoxy, alkylthio or halogen, alkoxy optionally substituted by halogen or aryl, a group having an alicyclic structure, optionally substituted amino, aryl optionally substituted by alkoxy, halogen or alkyl which may be substituted by halogen, phenoxy or heteroaryloxy which may be substituted by haloalkyl, alkyl, alkoxy, haloalkoxy, amino, nitrile, alkylthio, alkylsulfonyl or alkylsulfinyl, optionally substituted heterocyclic or heteroaryl having a 5 to 7 membered mono cyclic or 9 to 11 membered fused ring containing 1 to 3 nitrogen or oxygen, or aralkyl optionally substituted by halogen,

X represents oxygen or a group represented by a formula of NR_9R_{10} wherein R_9 and R_{10} each independently represents hydrogen, lower alkyl or aryl optionally substituted by alkoxy, halogen or alkyl which may be substituted by halogen, phenoxy or heteroaryloxy which may be substituted by haloalkyl, alkyl, alkoxy, haloalkoxy, amino, nitrile, alkylthio, alkylsulfonyl or alkylsulfinyl, and

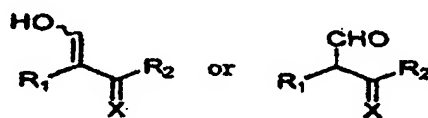
the group represented by R_1 is a group represented by the following formula;



wherein E represents C_{1-6} alkyl, C_{1-6} haloalkyl, C_{1-8} alkoxy, C_{1-6} haloalkoxy, optionally substituted amino, a group represented by a formula of $\text{R}_{26}\text{S}(\text{O})_p$, wherein R_{26} represents alkyl or aryl and p represents 0, 1 or 2, aralkyl optionally substituted by halogen, aryloxy optionally substituted by alkoxy, halogen or alkyl which may be substituted by halogen, phenoxy or heteroaryloxy which may be substituted by haloalkyl, alkyl, alkoxy, haloalkoxy, amino, nitrile, alkylthio, alkylsulfonyl or alkylsulfinyl, optionally substituted heterocyclic or heteroaryl having a 5 to 7 membered mono cyclic

or 9 to 11 membered fused ring containing 1 to 3 nitrogen or oxygen, optionally substituted heteroaryloxy, a group having an alicyclic structure, nitrile, nitro, alkoxycarbonyl, formyl or carboxyl, t represents 0, 1, 2 or 3, provided E each represents a same or different group when t is an integer of 2 or more integer.

6. (Currently Amended) Compounds represented by a formula (II),



(II)

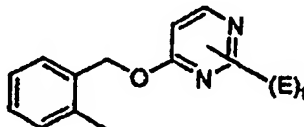
or both

wherein

R₂ represents alkyl optionally substituted by alkoxy, alkylthio or halogen, alkoxy optionally substituted by halogen or aryl, a group having an alicyclic structure, optionally substituted amino, aryl optionally substituted by alkoxy, halogen or alkyl which may be substituted by halogen, phenoxy or heteroaryloxy which may be substituted by haloalkyl, alkyl, alkoxy, haloalkoxy, amino, nitrile, alkylthio, alkylsulfonyl or alkylsulfinyl, optionally substituted heterocyclic or heteroaryl having a 5 to 7 membered mono cyclic or 9 to 11 membered fused ring containing 1 to 3 nitrogen or oxygen, or aralkyl optionally substituted by halogen,

X represents oxygen or a group represented by a formula of NR₉R₁₀ wherein R₉ and R₁₀ each independently represents hydrogen, lower alkyl or aryl optionally substituted by alkoxy, halogen or alkyl which may be substituted by halogen, phenoxy or heteroaryloxy which may be substituted by haloalkyl, alkyl, alkoxy, haloalkoxy, amino, nitrile, alkylthio, alkylsulfonyl or alkylsulfinyl, and

the group represented by R₁ is a group represented by the following formula;

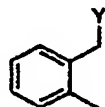


wherein E represents C₁₋₆ alkyl, C₁₋₆ haloalkyl, C₁₋₈ alkoxy, C₁₋₆ haloalkoxy, optionally substituted amino, a group represented by a formula of R₂₆S(O)_p, wherein R₂₆

represents alkyl or aryl and p represents 0, 1 or 2, aralkyl optionally substituted by halogen, aryloxy optionally substituted by alkoxy, halogen or alkyl which may be substituted by halogen, phenoxy or heteroaryloxy which may be substituted by haloalkyl, alkyl, alkoxy, haloalkoxy, amino, nitrile, alkylthio, alkylsulfonyl or alkylsulfinyl, optionally substituted heterocyclic or heteroaryl having a 5 to 7 membered mono cyclic or 9 to 11 membered fused ring containing 1 to 3 nitrogen or oxygen, optionally substituted heteroaryloxy, a group having an alicyclic structure, nitrile, nitro, alkoxycarbonyl, formyl or carboxyl, t represents 0, 1, 2 or 3, provided E each represents a same or different group when t is an integer of 2 or more integer.

7-11. (Canceled)

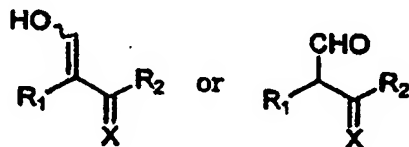
7-12. (Original) The production process according to claim 1, wherein the group represented by the formula (II) is a group represented by the following formula;



wherein Y represents a group to be eliminated when it is reacted with a nucleophilic reagent, optionally substituted phenoxy or optionally substituted heteroaryloxy, and the group represented by R_2 is a group represented by a formula of OR_{11} , wherein R_{11} represents lower alkyl.

13-40. (Canceled)

8-41. (Currently Amended) An after-treatment process in a step to produce compounds represented by a formula (II);



(II)

or both

wherein

R_1 represents hydrogen, halogeno, alkyl optionally substituted by alkoxy, alkylthio or halogen, alkoxy optionally substituted by halogen or aryl, a group having an alicyclic structure, a group represented by $R_3S(O)_q$, a group represented by R_4R_5N , a group represented by $R_6C(=O)$, nitrile, nitro, a group represented by $R_7C(=NR_8)$, aryl or aryloxy optionally substituted by alkoxy, halogen or alkyl which may be substituted by halogen, phenoxy or heteroaryloxy which may be substituted by haloalkyl, alkyl, alkoxy, haloalkoxy, amino, nitrile, alkylthio, alkylsulfonyl or alkylsulfinyl, or aralkyl optionally substituted by halogen,

R_2 represents alkyl optionally substituted by alkoxy, alkylthio or halogen, alkoxy optionally substituted by halogen or aryl, a group having an alicyclic structure, optionally substituted amino, aryl optionally substituted by alkoxy, halogen or alkyl which may be substituted by halogen, phenoxy or heteroaryloxy which may be substituted by haloalkyl, alkyl, alkoxy, haloalkoxy, amino, nitrile, alkylthio, alkylsulfonyl or alkylsulfinyl, optionally substituted heterocyclic or heteroaryl having a 5 to 7 membered mono cyclic or 9 to 11 membered fused ring containing 1 to 3 nitrogen or oxygen, or aralkyl optionally substituted by halogen,

R_3 , R_4 and R_5 each independently represents alkyl optionally substituted by alkoxy, alkylthio or halogen, aryl optionally substituted by alkoxy, halogen or alkyl which may be substituted by halogen, phenoxy or heteroaryloxy which may be substituted by haloalkyl, alkyl, alkoxy, haloalkoxy, amino, nitrile, alkylthio, alkylsulfonyl or alkylsulfinyl, optionally substituted heterocyclic or heteroaryl having a 5 to 7 membered mono cyclic or 9 to 11 membered fused ring containing 1 to 3 nitrogen or oxygen, or aralkyl optionally substituted by halogen,

R_6 and R_7 each independently represents alkyl optionally substituted by alkoxy, alkylthio or halogen, alkoxy optionally substituted by halogen or aryl, a group having an alicyclic structure, optionally substituted amino, aryl optionally substituted by alkoxy, halogen or alkyl which may be substituted by halogen, phenoxy or heteroaryloxy which may be substituted by haloalkyl, alkyl, alkoxy, haloalkoxy, amino, nitrile, alkylthio, alkylsulfonyl or alkylsulfinyl, optionally substituted heterocyclic or heteroaryl having a 5 to 7 membered mono cyclic or 9 to 11 membered fused ring containing 1 to 3 nitrogen or oxygen, or aralkyl optionally substituted by halogen,

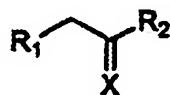
R_8 represents alkyl optionally substituted by alkoxy, alkylthio or halogen, alkoxy optionally substituted by halogen or aryl, nitrile, nitro, aryl optionally substituted by alkoxy, halogen or alkyl which may be substituted by halogen, phenoxy or heteroaryloxy which may be substituted by haloalkyl, alkyl, alkoxy, haloalkoxy, amino, nitrile, alkylthio, alkylsulfonyl or alkylsulfinyl, optionally substituted heterocyclic or heteroaryl having a 5 to 7 membered mono cyclic or 9 to 11 membered fused ring containing 1 to 3 nitrogen or oxygen, or aralkyl optionally substituted by halogen,

q represents 0, 1 or 2,

R_1 and R_2 each represents a group which may bond to jointly form a ring, and

X represents oxygen or a group represented by a formula of NR_9R_{10} wherein R_9 and R_{10} each independently represents hydrogen, lower alkyl or aryl optionally substituted by alkoxy, halogen or alkyl which may be substituted by halogen, phenoxy or heteroaryloxy which may be substituted by haloalkyl, alkyl, alkoxy, haloalkoxy, amino, nitrile, alkylthio, alkylsulfonyl or alkylsulfinyl,

by reacting a methylene compound represented by a general formula (I);



(I)

wherein R_1 , R_2 and X are as defined above, with either an formic acid ester or an orthoformic acid ester in the presence of a Lewis acid and a base, characterized in that the after-treatment process contains a step to add water following to an addition of C_{1-4} organic acid into the reacted solution to improve the separating property of the solution.

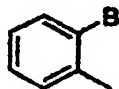
9 ~~42~~.

(Currently Amended) The after-treatment process according to claim ⁸~~41~~, characterized by using the C_{1-4} organic acid in an amount of 2.5 times mole or more of the ~~the~~ Lewis acid to be used.

10 ~~43~~.

(Original) The after-treatment process according to claim ⁸~~41~~, wherein the C_{1-4} organic acid is acetic acid.

- 11⁴⁴. (Original) The after-treatment process according to claim ⁸41, wherein the Lewis acid is titanium tetrachloride.
- 12⁴⁵. (Original) The after-treatment process according to claim ⁸41, wherein the base is triethylamine.
- 13⁴⁶. (Original) The after-treatment process according to claim ⁸41, wherein the group represented by R₁ in the compound represented by the formula (I) is a group represented by the following formula;



wherein B represents hydrogen, lower alkyl, lower alkoxy, haloalkyl, optionally substituted arylsulfonyloxyalkyl or optionally substituted lower alkylsulfonyloxyalkyl, and the group represented by R₂ is a group represented by a formula of OR₂₃, wherein R₂₃ represents lower alkyl, and B and R₂₃ are a group which may bond to jointly form a ring.